

CLAIMS

1-14. (Canceled)

15. (Previously Presented) A process for preparing a supported metal catalyst, comprising:

(a) impregnating a support with a solution of a salt of a metal selected from the group consisting of palladium, platinum, ruthenium, rhodium, iridium, osmium, holmium and gold;

(b) subjecting the impregnated support to a reduction process; and

(c) treating the impregnated support obtained in step (b) with an aqueous acid solution containing bromine and bromide ion.

16. (Previously Presented) The process of claim 15, wherein the concentration of bromide ions in the aqueous acid solution is between about 20 mg/l and about 200 mg/l.

17. (Previously Presented) The process of claim 15, wherein the concentration of bromide ions in the aqueous acid solution is between about 20 mg/l and about 100 mg/l.

18. (Previously Presented) The process of claim 15, wherein the concentration of bromine in the aqueous acid solution is between about 2 mg/l and about 20 mg/l.

19. (Previously Presented) The process of claim 15, wherein the concentration of bromine in the aqueous acid solution is between about 2 mg/l and about 10 mg/l.

20. (Previously Presented) The process of claim 15, wherein the pH of the aqueous acid solution is between about 1 and about 3.
21. (Previously Presented) The process of claim 15, wherein step (c) is conducted at a temperature between about 10°C and about 80 °C.
22. (Previously Presented) The process of claim 21, wherein the temperature is between about 40 °C and about 60 °C.
23. (Previously Presented) The process of claim 15, wherein, the impregnated support obtained in step (c) is separated from the aqueous acid solution and dried at a temperature between about 100 °C and about 140 °C.
24. (Previously Presented) The process of claim 23, wherein, a slurry is obtained in step (a), which is filtered, drained and then dried before step (b).
25. (Previously Presented) The process of claim 24, wherein the drying is carried out under conditions conducive to slow crystallization.
26. (Previously Presented) The process of claim 15, wherein the metal-salt solution comprises two kinds of metal salts so that a supported bimetallic catalyst is obtained.

27. (Previously Presented) The process of claim 26, wherein the two kinds of metal salts are a majority metal salt and a minority metal salt, and the bimetallic catalyst comprises about 0.001 % to about 0.1 % by weight minority metal based on the weight of the bimetallic catalyst.
28. (Previously Presented) The process of claim 26, wherein the metal-salt solution contains salts of palladium and gold.
29. (Previously Presented) The process of claim 26, wherein the minority metal is platinum.
30. (Previously Presented) The process of claim 15, wherein the support is a silica having a BET specific surface area.
31. (Previously Presented) The process of claim 29, wherein the BET specific surface is greater than 200 m²/g.
32. (Previously Presented) A supported metal catalyst, which comprises a support and a metal selected from the group consisting of palladium, platinum, ruthenium, rhodium, iridium, osmium, holmium and gold, wherein the metal is disposed on the support in a form of cluster of crystals, and wherein the size of the cluster is between about 0.1 μm and about 20 μm.
33. (Previously Presented) The catalyst of claim 32, wherein the size of the cluster is between about 0.1 μm and about 10 μm.

34. (Previously Presented) The catalyst of claim 32, wherein the supported metal catalyst contains about 0.1 % to about 10 % by weight based on the weight of the catalyst.
35. (Previously Presented) The catalyst of claim 32, which is a supported bimetallic catalyst comprising two kinds of metals.
36. (Previously Presented) A The catalyst of claim 35, wherein the two kinds of metals are a majority metal and a minority metal, and said catalyst contains about 0.001 % to about 0.1 % minority metal by weight based on the weight of the catalyst.
37. (Previously Presented) The catalyst of claim 35, wherein the metals are palladium and gold.
38. (Previously Presented) The catalyst of claim 35, wherein the minority metal is platinum.
39. (Previously Presented) The catalyst of claim 32, wherein the support is a silica having a BET specific surface area.
40. (Previously Presented) The catalyst of claim 39, wherein the BET specific surface is greater than 200 m²/g.

41. (Previously Presented) A process for manufacturing hydrogen peroxide, wherein conducting a direct reaction between hydrogen and oxygen using the supported metal catalyst of claim 32.